

DOCUMENT RESUME

ED 213 410

IR 010 037

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TITLE Determining Student Information Need Based Upon Required Work Activities.
PUB DATE Dec 81
NOTE 95p.; Master's Thesis, University of California at Los Angeles.
EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Academic Libraries; Case Studies; *College Faculty; *College Students; *Decision Making; Environmental Influences; Higher Education; *Information Needs; *Library Administration; Library Research; Questionnaires; *Task Analysis; Use Studies

ABSTRACT

This study examines the role of the user study as a management tool in academic libraries and proposes a task-oriented survey method to estimate the library clientele's need for documents. Research on work and task-oriented information studies is discussed and applied to the development of a survey instrument. A case study employing the task-oriented survey instrument is presented in the second half of the paper. Sixteen members of the faculty of the Department of Special Education at California State University, Northridge, responded to the survey questions in an interview or through campus mail. Forty courses and 824 students were represented in the faculty responses. Based on an expected need formula, it was estimated that the students would need more than 8,517 document exposures to successfully complete their assignments. The study includes three appendices: (1) Outline of Academic Library Services, (2) Department of Special Education Programs, and (3) the survey instrument. There is a 36-item bibliography. (Author/RAA)

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UNIVERSITY OF CALIFORNIA

Los Angeles

Determining Student Information Need
Based Upon Required Work Activities

Submitted in partial satisfaction of the
requirements for the MLS Degree,
Graduate School of Library
and Information Science

by

Wayne R. Montgomery

December 1981

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ACKNOWLEDGMENTS

A project of this nature necessarily intrudes on the time of many people. I would like to thank each respondent for granting an interview or returning their questionnaire. I would also like to extend special thanks to Dr. Barbara Kulik, Chairman, and Lucy Lediaev, Secretary, of the Department of Special Education, for their gracious help and cooperation. Special appreciation is due also to Dr. Norman Tanis, Director, and David Perkins, Head of Bibliography, of the CSUN Libraries, for their support and contribution. Many friends have given moral support and helpful comments to this project, but most especially Dr. John Richardson, Snowdy Dodson, Helen Bennett, Allison Gruver, and Doug Elerath.

ABSTRACT

This study examines the role of the user study as a management tool in academic libraries and proposes a task-oriented survey method to estimate the library clientele's need for documents. Research on work and task-oriented information studies is discussed and applied to the development of a survey instrument. A case study employing the task-oriented survey instrument is presented in the second half of the paper. Sixteen members of the faculty of the Department of Special Education at California State University, Northridge responded to the survey questions in an interview or through campus mail. Forty courses and 824 students were represented in the faculty responses. Based upon an expected need formula it was estimated that the students would need more than 8517 document exposures to successfully complete their assignments.

INTRODUCTION

This study examines the user studies as a tool for library evaluation and planning and draws attention to user activity as a significant correlate to library usage. The major objective of the study is to draw useful theoretical conceptualizations and empirical findings from the literature of library and information science and apply them to a pragmatic user survey technique.

User studies have been employed and studied for many years now (initially in the 1930's and 1940's, but predominantly since 1950) by many different groups (public and academic libraries, large scientific and technical information systems, and localized special information systems). The conceptual orientations to such user studies have been almost as numerous and diverse as the studies themselves (including systems analysis, operations research, psychological, sociological, and economical). The perspective of this study is that the management team (the director and immediate subordinates) of an academic library must plan and administer the services of the library on campus. Their need is for simple, effective tools for decision making (i.e., activity

statistics, user surveys, etc.) which have proven their worth in real life applications. The library management team has traditionally had little staff time or funding to research and develop specific facets of decision making tools and it is therefore economical and prudent to make critical and rational use of existing research.

This paper has developed just such a tool. Part I reviews the theoretical foundation of information systems and places academic librarianship into that context. It treats the academic library as a dynamic information system which can be analyzed, measured and evaluated. The theory and methods of user studies are then examined in concert with present library management practices. What emerges from this literature examination is that there is a significant relationship between user activity, particularly student activity, and expected library use.

Part II is a case study set up to apply the findings on user activities. It is not intended to produce scientifically sound findings, but rather to examine pragmatically some of the implications of an activity oriented user survey. The results from this severely limited survey indicated that (1) information need can be approximately measured, (2) scope of need can be measured, and (3) levels of need can be approximated.

CHAPTER I

USER STUDIES: THEORY AND DEVELOPMENT

This study proposes an improvement in traditional "user studies" employed by academic libraries to gather decision making information. It has been developed upon a particular set of theoretical foundations drawn from various sources. These conceptualizations are in no way common throughout the profession of librarianship, so it is necessary to present a conceptual foundation and framework upon which to base the investigation which follows.

At the outset the use of the phrase "user studies" needs to be clarified and redefined for the purposes of this study. Over the year librarians have used this phrase somewhat synonymously with such phrases as "user studies," "user needs analysis" or "user needs assessment." There has also been a parallel development in public libraries known as "community analysis" or "community needs analysis." Individually and collectively they describe an extremely heterogeneous set of activities, though they share the same aim: to investigate the relationship between the library and

its clientele. For reasons which will become more apparent later, the phrase which best describes the activity under investigation in this paper is "library clientele needs analysis." It specifies both determination and analysis of the library related needs of both the users and non-users in the library's clientele.

The Library as an Information System

In order to facilitate comparisons between libraries and the development of common techniques throughout the profession, library attributes and functions have been analyzed into their most fundamental common denominators. By starting at this level of analysis it is possible to examine each characteristic separately and in concert, propose governing principles, then generalize the findings to other similar libraries. The most fundamental attribute of all libraries is that they are organizations which facilitate the transfer of information.¹ In order to proceed with the investigation of this functional concept we need to know what information is, how and why it is transferred, what is optimum facilitation, and what role the organization plays in the facilitation of information transfer. Unfortunately, there are no clear answers to any of these questions, but we

¹See F. W. Lancaster, The Measurement and Evaluation of Library Services (Washington, D.C.: Information Services, 1977), p. 2; Brian C. Vickery, Information Systems (Hamden, Conn.: Anchor, 1974), p. 1.

will examine some answers proposed by researchers in the field.

The definition of information has virtually defied codification. Numerous scholarly debates have failed to arrive at a definition acceptable to all parties concerned.² However, it is possible to develop an operational definition to suit a specific set of circumstances. This is a widely accepted practice which requires only that the reader recognize its limitations and uses. For this study it is not necessary to use an extremely subtle definition since we will be addressing systems for handling documented information. Paisley and his colleagues have come up with a useful definition of information.

Information can be defined both structurally and functionally. Structurally, information denotes an encoding of symbols (e.g., letters, numbers, pictures) into a message of any mode, communicated through any channel. Functionally, information denotes any stimulus that alters cognitive structure in the receiver. The functional definition may be more readily understood through its converse: something that the receiver already knows (i.e., a stimulus that does not alter cognitive structure) is not information.³

²Sylvia G. Faibisoff and Donald P. Ely, Information and Information Need (Syracuse, N.Y.: Syracuse University, Center for the Study of Information and Education, 1974), p. 5.

³William Paisley, et al., Information and Work: Research on the Improvement of Practitioner Information Systems (Stanford, Calif.: Stanford University, Institute for Communication Research, 1980), p. 3.

The former definition allows us to speculate about document transfer without having to deal with complex psychological issues.

We are all producers and receivers of various modes of information (visual, auditory, tactile, olifactoral), but libraries have traditionally handled only the first three modes, in that order. At that they deal only in recorded or documented information. You usually cannot go to the library to hear a new lecture, see a live ballet, or shake the hand of the President of the United States. What you are likely to find is a magnetic tape of the lecture which interests you, a video tape of the ballet, and not much help with the handshake. In other words, the library, as presently conceived, is a selective facilitator of information use. You will find there only a specified variety of information documents.

We, the potential library user, are continuously surrounded by all manner of information exposures. We interact with friends and family. We watch television, read newspapers, advertising billboards, magazines, and view movies, etc. This brings us to the second fundamental concept about libraries. The library is a small part of the total information environment and must compete with similar transfer systems.

King and Bryant⁴ have developed a convenient model of the cycle of information transfer through documentation (see Figure 1). Libraries traditionally assume the responsibility for stages 4, 5, and 6. This single cycle represents all the formal document channels, like the many publishers of books, magazines, films, government documents, technical reports, and excluding much of the information generated by the mass media.

Most of these documents are available to the public without the mediation of the library, so why does the library have a role in the cycle? There are many reasons, but they all revolve around filling certain needs on a competitive basis. The main facilitation the library has to offer is a reduced individual expense for information. If documents are purchased collectively, the individual's portion of the cost can be greatly reduced. The second need which is facilitated better by libraries is as a finding and selecting aid. There is such a great variety and number of documents available, few individuals are able to easily find desired documents. This brings us to the third fundamental concept about libraries. The library organization exists to (1) maximize satisfaction of clientele information needs while (2) minimizing cost and time loss to

⁴Donald King and Edward Bryant, The Evaluation of Information Services and Products (Washington, D.C.: Information Resources, 1971), p. 2.

the user.⁵

The library, then, is an organization whose role is to facilitate the transfer of documented information, but whose organizational objective is to maximize satisfaction and minimize cost. Information transfer is facilitated through its three main subsystems (see Figure 2):⁶

- (1) a selection, acquisition and storage system,
- (2) an organization and control system, and
- (3) a system for presentation of services to the user.

Up until the early 1950s, when we witnessed dramatic innovations and concomitant increases in the production and dissemination of information products, libraries were able to operate as self-contained depository units. They were founded and organized upon vague idealistic principles with little attention given to the specifics of services to be rendered, population to be served, benefits to be realized and, most importantly, measurement of its success or lack of success. Many diligent librarians were able to satisfy and please certain numbers of people, but since there were seldom any clear mandates for library services, it was impossible to say whether this small group of happy people could be the measure of success for the library.

⁵Philip Rzasa and N. R. Baker, "Measures of Effectiveness for a University Library," Journal of the American Society for Information Science 23 (1972):248-253.

⁶Taken from Lancaster, Measurement and Evaluation, p. 10.

The so-called "Information Explosion" has brought many pressures to bear on traditional library services. We live in a much more information dependent environment. The greatest bulk of the production in the western world involves the production and use of information. With the vast sea of information products being generated potential users are more dependent than ever before on help in finding, locating and acquiring the products they need.

The traditional method of selecting documents for the collection and providing finding aids was a "dead reckoning" or "seat-of-the-pants" approach. Librarians would base their judgments upon conversations with selected individuals who came into the library (and occasionally meetings outside the library) and examinations of circulation statistics to determine what was desired and what was used. In and of themselves these are very good approaches to evaluating library services. However, they were usually not conducted in a systematic manner and most importantly they were not applied to an overall governing concept for library service.

Times have changed though. Academic librarians are now well aware of the need to respond to pressures for change.⁷ There has been a shift of perspective outward

⁷Warren J. Haas, "Managing Our Academic Libraries: Ways and Means," College and Research Libraries 40 (March 1979):116.

to view the library's operation as part of the total information environment including all producers of information products, all the channels of dissemination and all the potential users of library services.⁸

This has also brought about a shift in motivations and attitudes of academic librarians. No longer is there a total focus on building a large and tidy collection of materials in the hope that there will be someone who will come in and use them. Realizing they are in a competitive environment, librarians now see the need to actively promote their materials and services to create and influence user demands.⁹

What then are the functions of the academic library as an "information utility" on campus? Millicent Abel has provided a very appropriate formulation of these functions.

They are the planning, provision and evaluation of service designed to meet the needs of the particular clientele group that is primary to the given academic library. This responsibility entails developing collections that as a whole respond to the needs of the local scholars and designing or adopting flexible and efficient alternatives for bibliographic access to those and other collections. It also requires an

⁸Duane E. Webster, Improving Library Performance: Quantitative Approaches to Library Planning (Washington, D.C.: Association of Research Libraries, Office of University Library Management Studies, 1977), pp. 17-18.

⁹Morris Hamburg, et al., Library Planning and Decision-Making Systems (Cambridge, Mass.: M.I.T. Press, 1974), p. 18.

ability to re-examine the library's priorities and operations critically, to develop means to evaluate the effect of those services, and to be aware of new alternatives that will enable the library to delivery those services more effectively.¹⁰

The "planning, provision, evaluation" cycle is now widely accepted as the conceptual foundation for optimum library service. There are presently several different techniques for applying the "planning, provision, evaluation" cycle¹¹ but they agree upon the following points. (1) The library should operate under a clear set of goals which specify what the library is expected to do and who will receive its services. (2) The planning process should eventually involve the whole library. (3) Descriptive and operational data should be collected on internal operations, on the external environment, and on the clientele using the services. (4) Services should be tailored to maximize the specified benefits to the clientele. (5) Specific performance

¹⁰ Millicent D. Abell, "The Changing Role of the Academic Librarian: Drift and Master," College Research Libraries 4 (March 1979):161.

¹¹ See Hamburg, Library Planning; Vernon E. Palmour, et al., A Planning Process for Public Libraries (Chicago: American Library Association, 1980); Duane Webster, "The Management Review and Analysis Program: An Assisted Self Study to Secure Constructive Change in the Management of Research Libraries," College and Research Libraries 35 (March 1974):114-125.

objectives should be set for each library program and they should be evaluated according to those objectives. Finally, (6) this cyclical operation should be conducted on an on-going basis.

Library clientele needs analysis form the critical input and feedback link upon which service planning decisions are made. Without knowing what information is needed by its clientele it is well nigh impossible for the library to provide effective and relevant service. This, then, is the present conceptual context in which analysis of clientele information needs is performed by academic libraries.

The Library Clientele Needs Analysis

Bibliographic Sources on Information Needs Studies

Library clientele needs analysis has its roots in earlier studies of library usage and library community analysis with an invigorating injection of information science work in the 1950's and 1960's. The development and use of surveying methods for evaluating library operations is well covered by a panel of experts in Library Survey, edited by Maurice Tauber and Irlene Stephens.¹² This pivotal work caps the long and productive use of large scale surveys of internal library operations, but makes

¹²Maurice F. Tauber and Irlene R. Stevens, eds., Library Surveys (New York: Columbia University Press, 1967).

only cursory comments on the study of clientele needs. As adjuncts to the conceptual and technical work of Library Survey there are three important bibliographies of surveys carried out by librarians and information researchers. Pauline Atkins drew together listings from several previous limited listings and collected many additional citations from international library and information publications.¹³ One of the significant sources from which Pauline Atkins drew listings is the voluminous bibliography compiled by Richard Davis and Catherine Bailey.¹⁴ Another significant source for Ms. Atkins is a work by William Paisley which contains a review and analysis of user studies up to 1965.¹⁵ His work brought to bear the more rigorous and critical evaluation techniques that had been developing in the field of information science. From the middle of the 1960's the work done by librarians and that done by information scientists started to come together, though there continues to this day to be basically two bodies of literature. Since

¹³Pauline Atkins, Bibliography on Use Studies 1950 - November 1970. Library and Information Bulletin, No. 14 (London: The Library Association, 1971).

¹⁴Richard Davis and Catherine Bailey, Bibliography of Use Studies (Philadelphia: Drexel Institute of Technology, Graduate School of Library Science, 1964).

¹⁵William Paisley, The Flow of Behavioral Science Information: A Review of Research Literature. Stanford, Calif.: Stanford University, Institute of Communication Research, 1966).

1966 the Annual Review of Information Science and Technology has periodically contained a section for a review and evaluation of studies relating to information needs and users. Though most of the material reviewed relates to information problems in science and technology, much can be gotten from the discussions of theoretical and methodological issues of the papers reviewed.

Pauline Atkins collected hundreds of citations and yet it was not until Brittain published his work Information and Its Users¹⁶ that we had a single comprehensive summary and sourcebook. He distilled and summarized all the previous work from many different fields and derived a common methodology for needs studies. He also takes pains to present findings from studies in the social sciences which are even still disproportionately underrepresented in the literature.

Other reviews which have special significance for librarians are User Studies: A Review for Librarians and Information Scientists by Marcia Bates¹⁷ and Information and Information Need by Sylvia Faibisoff and Donald Ely.¹⁸ Both works are extremely valuable for their discussion and evaluation of theories, methods and findings of user studies

¹⁶J. Michael Brittain, Information and Its Users: A Review with Special Reference to the Social Sciences (New York: John Wiley, 1971).

¹⁷Marcia Bates, User Studies: A Review fo Librarians and Information Scientists (Washington, D.C.: U.S. Office of Education, 1971).

¹⁸Faibisoff and Ely, Information and Information Need.

and the implications for library practitioners. Lancaster has a chapter in his book Measurement and Evaluation of Library Services¹⁹ which gives a history of "Library Surveys" and includes an excellent bibliography.

The most important survey and analysis of the research on library user studies is the article by Robert Burns in the Journal of Academic Librarianship.²⁰ He presents a detailed discussion of the rationale for the utilization of a needs analysis by academic library managers. The application process is outlined and basic methods are described and evaluated. This work is the major source for the section which follows on the Nature of Information Needs Studies.

Since 1978 there has not been any general or synthesizing works on user needs studies by academic libraries, but there have appeared two related bibliographies which are worthy of mention here. The first by Achleitner and Neroda²¹ deals with community analysis by public libraries. The aims and techniques are so similar to studies conducted by other librarians and other information specialists that they are

¹⁹Lancaster, Measurement and Evaluation of Library Services, pp. 299-311.

²⁰Robert W. Burns, Jr., "Library Use as a Performance Measure: Its Background and Rationale," Journal of Academic Librarianship 4 (March 1978):4-11.

²¹Herbert K. Achleitner and Edward Neroda, Methods of Community Analysis with an Emphasis on Libraries. CPL Bibliography, no. 22 (Chicago: American Library Association, Council of Planning Librarians, 1980).

distinguished only by the very heterogenous clientele they serve. The second, compiled by Mary Young²² at NTIS, is actually a series of accumulated bibliographies drawn from NTIS's data base on the topic of user needs. Its great advantage is that it is current but its disadvantages are that it covers mostly studies of automated information systems and that it costs \$30.00 in either fiche or hard copy (it is not a depository item).

There are many more bibliographies appended to articles throughout the literature, but they largely if not completely duplicate what is listed in the sources previously mentioned. With what has been presented here the reader can be assured of finding all the studies which are most relevant to the study of library users.

Nature of Information Needs Studies

As was pointed out above, the motivation to study the information needs of the library's clientele comes from a perceived library management need: "how to allocate and control scarce resources and manage and control library activities, so as to maximize benefits imparted (to the clientele)."²³ The factor which is the determinant of the

²²Most recent as of this writing is: Mary E. Young, comp., User Needs in Documentation and Information (Springfield, VA.: National Technical Information Service, June 1981).

²³Hamburg, et al., Library Planning and Decision-Making Systems, p. 43.

of the success or failure of the system are the benefits experienced by the user. Unfortunately, no one has yet been able to determine an adequate measure of the benefits of library service and therefore a means of judging performance.²⁴ There is general agreement that in the absence of any clearly established means of measuring performance we must continue to rely on many of the techniques that are now in use, such as circulation data, reference and inter-library loan statistics and the clientele survey.²⁵ The clientele survey is gaining importance as a tool for library management.²⁶

What then does an information needs study do? It can do a variety of things serving a variety of management needs. In general they fall on a spectrum bounded on one side by very limited and specific studies collecting data on specific library services. While at the other extreme are the broad, open-ended studies simply aimed at determining "what's happening." These latter studies usually discover the general characteristics of the population and indicate where more specific studies should be conducted. In any event, no

²⁴Rosemary Ruhig DuMont and Paul F. DuMont, "Measuring Library Effectiveness: A Review and an Assessment," in *Advances in Librarianship*, Vol. 9, ed. by Michael Harris (New York: Academic Press, 1979), pp. 112-117.

²⁵Burns, "Library Use as a Performance Measure," p. 6; DuMont and DuMont, "Measuring Library Effectiveness," p. 137.

²⁶Ibid.

study should be without a definite purpose, plan and organization. So, before we examine typical contents of needs analysis studies, we need the basic assumptions and established guidelines of current practice.

Robert Burns, who is himself a veteran information needs researcher, has compiled an excellent list of the assumptions and guidelines which are necessary requisites for the success of any needs assessment study.²⁷

A. Assumptions and Rationale

1. The individual member of the library's clientele is the key figure in the evaluation of library services; however, it is possible to investigate and to describe client behavior in the aggregate in a meaningful way using statistical descriptors such as the measure of central tendency.
2. The study should include both users and non-users.
3. The study of the clientele should be done on an on-going basis. Such studies take a slice from the flow of events in time and will not accurately reflect what went on before nor what will happen after. The surveyor must make continuous studies to determine if recorded tendencies persist.
4. Clientele studies should form part of a larger feedback loop embracing all of the performance measures available to the library managers.

²⁷ Adapted from Robert Burns, "Library Use as a Performance Measure," pp. 7-8.

5. The study should differentiate between descriptions of actual activities and potential activities.
6. The study must examine the client in his total information environment, including both formal and informal channels. A full description of the social environment of the clientele provides a fuller picture of the influences on clientele behavior.
7. The findings should be generalizable from one research setting to another.

B. Data Gathering Instrument

1. The study of use is interdisciplinary and multifaceted. It follows that a clientele study should involve a variety of research techniques and instruments in its investigation and not confine itself to a single tool like a questionnaire, interview or diary.
2. The instrument should employ a variety of formats for describing clientele responses. It is desirable that any given instrument allow the respondent more than one of the following types of responses:
 - a. Descriptive narrative, either written or oral.
 - b. Binary (yes/no) responses.
 - c. Scaled responses.
 - d. Multiple choice selections of one or more desirable options in priority order.
 - e. Numeric responses.
3. The instrument and its purpose should be presented so as to evoke the respondent's enthusiasm.

This list is somewhat unstructured, but it still provides one of the best listings of all the necessary and important points to be considered when setting out on a survey project.

More detailed guidance on the planning, design and conduct of library surveys can be gotten from Maurice Line's book on that subject.²⁸

Now that we have established the appropriate orientation, we need to know just what topics we should collect data on. Again, this is largely determined by the institutional context and the particular problems of the site. However, Brian Vickery has collected topics and characteristics which have been studied in the past (see Figure 3).²⁹ It is useful in suggesting topics on which to collect data and it sketches the parameters within which needs analyses are focused. It is unlikely that a surveyor would wish to collect data on all the facets which Vickery lists. As we will see below, there is yet no consensus as to which factors are the most important.

We can approach data gathering on the facets listed from two general perspectives:

- (1) Factors affecting the demand for library services.
- (2) The user's perception of (satisfaction with) library services.

Adopting objectives in either of these perspectives automatically narrows the selection of facets which are applicable. The first

²⁸Maurice Line, Library Surveys: An Introduction to Their Use, Planning, Procedure and Presentation (London: Clive Bingley, 1967).

²⁹Vickery, Information Systems, pp. 48-52.

broad approach can be based primarily upon objective data such as age, job title, distance from the library, job descriptions, etc. The second, however, is very difficult to deal with. Peoples' perceptions are so ephemeral and incompletely understood that there are few adequate techniques for collecting let alone evaluating such data. It is unfortunate that this is one of the most important types of feedback for library management and planning. For these reasons and because the author has had no experience with psychology, we will leave this approach and examine the other more fully.

All the facets listed by Vickery have been related by researchers to demands for library service. There has been little help given in deciding which ones are the most important. Individual studies have generally reflected what was found to be important in that particular environment in determining library demands. To date there have emerged only a few cross-the-board factors influencing demands for library services. They are:

- (1) The principle of least effort. People in general expend as little energy as possible in pursuit of their particular goals. This applies equally to psychological as well as physical effort.
- (2) Informal or personal channels are generally preferred over formal or impersonal channels of communication. This is due mainly to the editorial control the user commands over the interaction process and the immediacy of feedback.

- (3) People are generally resistant to change their information seeking behavior except when they are highly motivated.³⁰

All other factors seem to be situationally dependent.

At this point it is important to note the levels relationships between the potential library user and information in order to understand the library's role in the process.

Robert Taylor has identified four levels of the information query. He identifies them as:

- (1) the actual, but unexpressed need for information (the visceral need);
- (2) the conscious, within-brain description of the need (the conscious need);
- (3) the formal statement of the need (the formalized need);
- (4) the question as presented to the information system (the compromised need).³¹

For our purposes here we can simplify the four stages into three as Orr and Line have done.³² We can express Taylor's first level as the fundamental level of NEED as yet unrecognized. As we will see below, this level can be directly

³⁰Lauren B. Doyle, Information Retrieval and Processing (Los Angeles: Melville Publishing Co., 1975), pp. 380-383.

³¹Robert S. Taylor, Question-Negotiating and Information Seeking in Libraries. Studies in the Man-System Interface in Libraries, Report No. 3 (Bethlehem, Penn.: Lehigh University, 1967).

³²R. H. Orr, "Progress in Documentation: Measuring the Goodness of Library Services: A General Framework for Considering Quantitative Measures," Journal of Documentation 29 (September 1973):324-325; and Maurice B. Line, "Information Requirements in the Social Sciences," Journal of Librarianship 1 (January 1969):6-7.

related to situational factors such as disciplinary characteristics, organizational goals, and task requirements. Taylor's level 2 and 3 can be subsumed under the heading of WANTS. They are what the inquirer would like to have and also what he believes is available. His wants are generally beyond the capabilities of the information system, including such desires as instantaneous delivery, digestion and summary of information, and tailored output. Level number 4 can be taken as the DEMANDS actually placed upon the information system. This is the level that libraries have traditionally concerned themselves. However, in order to provide a dynamic and useful service to the specified clientele the library must consider all three levels of relationship between the user and information: NEEDS, WANTS, and DEMANDS.

Paisley and Mick³³ have shown that library managers can go out to their clientele and by studying their work situation can determine such aspects of NEED as (1) subject scope, (2) relative volume of need, (3) the level of need, and (4) the medium of documentation desired.

WANT is another important aspect of query development that largely determines the user's satisfaction with an

³³William Paisley, et al., Information and Work; Colin K. Mick, et al., "Toward Usable User Studies," Journal of the American Society for Information Science 34 (September 1980):347-356.

information service. This process has been measured with "before" and "after" surveys to determine levels of satisfaction. Again, this area is based almost entirely on the user's perceptions and is therefore very difficult to study.

DEMAND, on the other hand, is much the easiest to measure and evaluate since they are placed in the information system. They can be documented and evaluated against information supplied. Here again there needs to be some input from the user in regards to the "quality" of the answers supplied by the information system.

WANTS and DEMANDS involve issues of perception on the part of the potential user, whereas NEEDS can be largely determined from objective information. We can identify organizational objectives from printed sources, program goals can be determined in the same way, and most tasks can be functionally defined. For library purposes, tasks should be defined in terms of their information dependence. In the academic setting almost all tasks are information dependent, but only certain ones lead to use of the campus library. This issue will be dealt with in the succeeding section.

There is a great deal of very useful information and literature available on the way libraries can deal with actual demands on their services, but in this study we are

concerned with attempting to identify the NEED situation and thereby derive some indication of potential library service demands.

Information Needs and Environmental Factors

As early as 1935 McDiarmid noticed that student course work had a direct effect on the way the campus library was used. His contribution, however, seems to have laid unutilized until the 1960's. Most of the large needs studies that were conducted in the 1950's and 1960's found that work tasks or work constraints of scientists and technologists were among the major factors affecting demands on library services.³⁴ In 1962 Mote noticed that demands put on a company library system by researchers and scientists were very closely related to the kinds of jobs they were performing.³⁵ Previous work had tried to draw relations between library use and the user's place in the organizational and social environment. Mote also noticed that information gathering patterns are related to subject disciplines. In 1971 Wood noted that,

³⁴Stephen Feinman, et al., "A Conceptual Framework for Information Flow Studies," in Susan K. Martin, comp., Information Politics: Proceedings of the 39th Annual Meeting of the American Society for Information Sciences, Vol. 13, Part I: Abstracts of Papers (Washington, D.C.: ASIS, 1976).

³⁵L. J. B. Mote, "Reasons for the Variation in the Information Needs of Scientists," Journal of Documentation 18 (1962):174.

Nearly all the investigations that have been reported lead one to conclude that the usefulness of the various information channels is determined by the functional responsibility of the individual.³⁶

Hamburg and his associates noticed the same occurrence. They found that when they related the user's position in the university, with subject major, with activity, one idiosyncrasy emerged. "Demand for library services seems to be more nearly linked to the activities in which the user is engaged than to the position of the user in the university community."³⁷ For example, an undergraduate physics major consults a history document because he is enrolled in a history course, not because he is a physics major. The same conclusion has been recorded by McGrath, Huntsinger, and Barber³⁸ and John Lubans, Jr.³⁹ Lubans found that library use had no relationship to the aptitudes or performance of the students he studied. Library use was related almost exclusively to course requirements.

³⁶D. N. Wood, "User Studies: A Review of the Literature From 1966-1970," ASLIB Proceedings 23 (1971):13.

³⁷Hamburg, et al., Library Planning and Decision-Making Systems, p. 56.

³⁸William E. McGrath, Ralph Huntsinger, and Gary Barber, "An Allocation Formula Derived from a Factor Analysis of Academic Departments," College and Research Libraries 30 (January 1969):52.

³⁹John Lubans, Jr., "Non-Use of an Academic Library," College and Research Libraries (September 1971):326.

In a recent study by Pailsey, et al.⁴⁰ of the information gathering behavior of scientists, engineers, and managers employed by the U.S. Forest Service, they found that the specific tasks that the individuals were involved in had the greatest bearing on the use of formal and informal information channels. It did not seem to matter very much whether the worker was trained as a chemist, hydrologist, civil engineer, or manager, but rather whether the tasks they performed were information dependent.

All the studies just mentioned arrived at their conclusions somewhat by accident rather than by design. Most were attempting to see what the relations were between a large number of factors, like those on Vickery's list, and information gathering behavior. Mick and his associates,⁴¹ however, have been working on clarifying the role of client task activities in information behavior since 1976. They were concerned that so little of the previous work in this field had produced usable results for library managers. So, they set about gathering strong statistical data on a specific set of hypotheses. The hypotheses posited positive relationships between hierarchical levels of information seeking behavior (see Figure 4). Essentially, what their

⁴⁰William Paisley, et al., Information and Work, p. 53.

⁴¹Mick, "Toward Usable User Studies," pp. 347-356.

findings indicate is that (1) needs can be determined from the clients' situation, (2) information gathering activity can be determined from the needs, and (3) satisfaction can be determined from the actions taken by the client.⁴²

The full description of their study and findings has not been published yet, so we are left with this tantalizing cause and effect principle without sufficient detail to apply it to other studies.

Even without the details of this study we can make some educated guesses about appropriate particulars. Using Vickery's list of relevant information gathering factors, we can supply appropriate factors to each of the major levels in Mick's model of information gathering behavior. From there we can gather data on each level of factors in a population and see for ourselves if there is a relationship. The great value of a model such as this is that we can predict library related behavior. Naturally, the expected behavior would only be predictable in degrees of probability, but some prior knowledge of likely client behavior would be very helpful.

⁴²Ibid., p. 352.

CHAPTER II

CASE STUDY

In order to gain an understanding of how the theoretical models presented in the preceding section might be employed for data collection in library planning, the author developed a case study based upon these concepts. Ideally, a study of a library clientele's information needs should be part of an overall library planning program. It should take its place alongside the investigation of the library's fiscal, personnel, operational and political situation. However, due to constraints on time and resources a much more limited study was devised. The objectives of the study were:

- (1) To develop an appropriate methodology for the measurement of "activity related information need" in an academic setting.
- (2) Develop a data gathering instrument.
- (3) Evaluate the findings and make recommendations for other studies.

Throughout the case study the guiding principle was to strive for a technique that would be generalizable to other academic libraries.

We have already seen that required course work generates the information needs of students in a college or university.

But, we also saw that this need can be satisfied by a wide range of sources (personal conversation, books, magazines, films, etc.) over a wide range of subjects. Academic library planners would like to be able to anticipate the needs that will be consummated in demands placed upon the campus library. Basically, we need to draw a relation between the general needs of the library's clientele and the appropriate library service programs. More specifically, we need to relate the following:

I. Library Services

- A. Document Collection
 - a. books
 - b. serials
 - c. audio/visual products
 - d. kits, games, pictures, and program packages.
- B. Finding Aids
 - a. classification and storage
 - b. catalog
 - c. reference materials
 - d. use counseling
- C. Utilization Aids
 - a. copying service
 - b. reading areas
 - c. audio/visual machines
 - d. circulation system
 - e. reserve service

II. Clientele Information Needs

- A. Subject Scope
- B. Level of Complexity
- C. Volume of Need
- D. Type of Documentation (Channel)
- E. Time Constraints

There are two approaches we can take to this problem:

(1) study the environmental factors which generate the information need, or (2) study the actual information gathering behavior of the clients. The former approach is somewhat easier to study and can also help to indicate discrepancies

between need and actual practice.

We can better understand the benefits of studying the student's information environment rather than their actual information gathering behavior by referring back to the teaching/learning situation in the previous section. It is the instructor who creates the activities which require the student to reproduce acquired knowledge and skill. And it follows that when information gathering (ancillary to the lecture) is required of the students, the instructor must have some notion of the nature of the documents which will provide the needed information. Accordingly, it can be assumed that each instructor has a knowledge of the modes of information documentation and dissemination in their own field and can direct their students to the appropriate channels (data medium, textual medium, audio/visual medium). Therefore, it is possible to examine the relationship between an instructor, his course and the documentation in his discipline by questioning the instructor.

However, it is considerably more difficult to examine the kind and amount of help the students will require in finding the information which will satisfy their course work. Each student brings to the situation a unique set of skills, capabilities and personal style. When an instructor assigns a library research project, it is highly likely that the students in that class will come in to the library to seek out the appropriate documents or information. However, there

is no adequate way of determining how much finding and utilization help each patron will seek out.

For these reasons and for the sake of ease and clarity it was decided that the study would focus on a group of faculty members. Another reason for studying the faculty in this case study is that each instructor's required course work results in common information needs in a number of students. For example, one instructor requires a short investigative report, but each of the students in that class will have to go out and gather information to complete the project.

The methodology of the case study is built upon the assumption that instructors have a notion of what information and sources will satisfy the requirements of their course. Naturally, in most courses the class lecture supplies most of the information required of students. The library can only expect to be called upon to supply information ancillary to the classroom presentation. We decided to ask the instructors, (1) what type of activities were required for a grade, (2) what types of documents would supply the necessary information, and (3) where the instructor expected the student to find the documents. By comparing these results we can get a measure of the probability of library use (as anticipated by the instructor). By multiplying this times the number of students in the class, and relating this to the appropriate range in the LC classification scheme we can get a relative measure of the demand to be placed upon the collection.

Though it is beyond the scope of this study to examine all the uses and implications of the information gathered by the process described here, we will make some observations and some suggestions about employing such a process.

Context and Population of Study

The author was most interested in examining the usefulness of the process described above in an academic library setting. The author's work site, California State University at Northridge (CSUN), was selected for the study because of its proximity and accessibility.

Northridge is a largely residential suburb of Los Angeles located approximately 25 miles northwest of downtown Los Angeles. It is in the western extremity of the San Fernando Valley which is bounded by mountains on three sides; north, west and south. The Santa Monica Mountains to the south form a natural impediment to travel between the valley and the rest of the Los Angeles Metropolitan area. This range of mountains stands between Northridge and two of the largest research collections in Southern California, the libraries of U.S.C. and U.C.L.A. The role these collections play in the information use behavior of the students and faculty at CSUN is yet undetermined, though it is felt that they might have some influence.

CSUN has the largest library collection in the San Fernando Valley. The two Junior Colleges in the valley have significantly

smaller collections than CSUN and are naturally not intended to serve upper division or graduate research. Other libraries in the valley (within an eight mile radius) which are available to students can be categorized as follows:

City Public	=	9
School	=	7
School District Resource		
Collection	=	1
Hospital	=	4
Total		<u>21</u>

The public library branches in the valley are small and recently have had their hours of operation cut severely. The main public library in downtown Los Angeles is very large and adequate for many kinds of research. However, this collection was never even mentioned by the faculty members interviewed.

The CSUN libraries include the full range of services described by Hamburg (see Appendix I).⁴³ The collection numbers 700,000 bound volumes and is housed in two buildings. The Delmar T. Oviatt Library contains all items in the Library of Congress Classification "A" through "P" and appropriate Z's. It also houses the following services:

- (1) Main Reference Area (including on-line searching).
- (2) Microform Room (including ERIC microfiche).
- (3) Government Documents Depository Collection.
- (4) Audio/Visual Services (not administered by library).
- (5) Inter-Library Loan service.

The South Library houses items classified from "Q" through "V" and appropriate Z's, as well as the following services:

⁴³Hamburg, Library Planning and Decision-Making Systems, pp. 238-242.

- (1) Science Reference.
- (2) Reserve Book Room.
- (3) Center on Deafness Library (not a part of the CSUN libraries).
- (4) Instructional Materials Laboratory (teaching aids and related equipment).
- (5) Learning Resources Center (a tutorial center, not a part of CSUN libraries).
- (6) CSUN Libraries' Technical Services.

CSUN is predominantly a teaching institution with classroom instruction taking precedence over research. Accordingly, the budget and service programs are aimed at supporting the instructional program. The CSUN Libraries have set their priorities of service in the following order: First, undergraduate programs; second, graduate programs; third, faculty research.⁴⁴ The campus libraries are also committed to developing a combined collection with general over-all strength.

Selecting a population to study was somewhat of a problem. In addition to having as much homogeneity as possible, it needed to be a manageable size for the time constraints of the author. Several colleagues suggested the faculty of the Department of Special Education. That department has a very vigorous and nationally recognized program. CSUN has received national attention for its support of deaf educational activities. The National Center on Deafness located on campus has been the impetus for the development of this program, but it found fertile ground at CSUN and got strong support

⁴⁴ California State University, Northridge, Libraries, "Library Goal Statement, Draft #3, June 24, 1980," Section II.

from the Department of Special Education. For these reasons the library staff was eager to get any additional information about the department and their needs, consequently this group was selected for the study.

For the time period of this study the group consisted of 14 full-time and 20 part-time faculty members. Two other staff members were not teaching courses at the time. Thirty-four seemed to be a manageable group for study, so they were all included in the target population. The factors which linked them together as a group were the following:

- (1) Organizational (all employed by CSUN, Department of Special Education).
- (2) Professional (all university teachers).
- (3) Subject discipline (Special Education).

Department of Special Education:
Courses and Programs

The Department of Special Education offers a wide range of courses on the education of exceptional pupils. The range of pupil exceptionalities addressed by the department includes: learning disabilities, emotionally disturbed, gifted, physically handicapped and especially the hearing impaired. Course levels range from the lower division 100 and 200 level courses to graduate 500 level courses. The programs of study for a certificate or degree are all graduate level. The three basic programs administered by the department are:

- (1) Special Education Specialist Credential Program.
- (2) Master of Arts Degree in Education with specialization in Special Education.
- (3) Resource Specialist Certificate.

Appendix II lists the program details.

The undergraduate level courses, level 100 through 300, serve mainly as electives for students in other departments though they are available to Special Education majors as electives as well.

All the organized programs in the department require courses in the 400 or higher level. This indicates that there is an implied level of prior knowledge for admittance to these higher level courses. Many of the upper division and graduate level courses must be taken in sequences which usually run from lower numbered courses to the higher numbered courses. This process is important to note in relation to the overall teaching process in the university (see Figure 5), and subsequently in the library's relationship to the teaching program. It is uncertain how the information needs of the graduate student are different from the undergraduate student, but we can say that the graduate student is much more knowledgeable in their subject than the undergraduate. Whether this means that the graduates' needs are more complex, detailed, abstract or sophisticated has not yet been adequately determined.

What we can tell about the teaching program in the Department of Special Education is the subject scope of the

courses (listed in the course catalog), the program course clusters, and relative level of knowledge attainment for each course. These factors will be utilized in the recommendations portion of this paper.

Preliminary Investigation of the Teaching Situation

In order to determine the range and type of auxiliary information sources (library materials, bookstore books, etc.) used in conjunction with the teaching program in the Department, preliminary interviews were conducted with eight of the full-time faculty members. The interviews dealt with teaching style as it relates to document use, but general comments on any library related topic were encouraged. It became apparent that Special Education has a unique mix of documents used; much different from that reported in the studies of scientists and technologists. Audio-visual materials were frequently mentioned as teaching aids used by the faculty and recommended to the students for their student teaching. Miscellaneous kinds of documents such as educational kits and games were frequently mentioned as well. Below is a list of document types suggested by faculty members as being likely candidates for required student use.

- (1) Books purchased by the student.
- (2) Books available in libraries.
- (3) Articles available in libraries.
- (4) Cognitive or behavioral tests.
- (5) Audio/visual media (films, filmstrips, slides, audio tapes, video tapes, etc.).

- (6) Educational kits or games.
- (7) Documents synthesized and produced by the instructor (copies of articles, syllabus, digests, etc.).

Surprisingly, ERIC fiche documents were not mentioned in any of the interviews. Subsequent conversations revealed that much of the current practice information, for which ERIC's Resources in Education is a good source, is specific to each state. Such documents on California practice are most generally available in hard copy. The rest of the state-of-the-art materials are available in journals.

Judging by the experiences of Lubans and also Nelson with student library usage and course requirements, it was apparent that we should only document those course activities which are required for a grade. As previous research has shown, library users will generally pursue the path of least effort to satisfy activity requirements. So, it was assumed that students would seek out and utilize only those documents which were required to complete the tasks of the course. The results of the preliminary interviews indicated that most course work required for a grade could be categorized in one of the following classes.

- (1) Objective and/or essay exams in class.
- (2) Formal term papers.
- (3) Short oral or written reports (including reading reports and bibliographies).
- (4) Lesson and curriculum plans.
- (5) Media projects, kits and games.
- (6) Skill performance (student teaching, micro-teaching, sign language performance).

The questions which were developed based upon these two lists formed the central portion of the survey instrument.

Design of the Survey Instrument

The survey instrument was to be designed primarily to gather data on the required student tasks in Special Education Courses and their relationship to library usage. A secondary goal which was requested by library staff members, was to gather data on the information gathering behavior of the target population, the faculty of Special Education. The general guidelines which governed the design of the entire instrument were:

- (1) to collect data on objective events or characteristics in preference to perceptual data,
- (2) to strive for understandability and relevance to the circumstances of the respondents,
- (3) to be as brief and simple as possible.

See Appendix III for a copy of the final survey instrument.

In order to study the information gathering behavior of the faculty, the following series of questions were devised based upon findings in the literature. The numbers correspond to the questions on the instrument itself.

- (1) Position in the organizational hierarchy.
- (2) Seniority in the organization.
- (3) Organizational involvement (as indicated by committee membership).
- (4) Distance from the library.
- (5) Information related work (research or consulting).

Question number ten asks the respondent to rate the relative importance of nine typical ways of finding out about information or documents. This question together with question number six which asks for the frequency of library use, could provide an indication of the preferred channels and sources of information/or documents. Ultimately, we wanted to get some indication of the information gathering behavior of the faculty.

Question eleven was intended to indicate whether the faculty associated positive or negative experiences with the library. We wanted to see if this had any relation to either library usage or teaching style.

Questions seven, eight, and nine are the core questions for the study. Questions seven and eight are based upon those lists of activities and documents derived from the preliminary investigation. They ask the instructor to relate each of his courses to required tasks and the tasks to appropriate document types. Question nine asks the instructor to indicate where he expects his students to find the appropriate documents for the required tasks. Tabulation and correlation of these factors is covered in the sections that follow.

Scheduling and Conducting the Survey

We felt that the best time to conduct the survey would be shortly after the beginning of the semester. A couple of weeks were allowed for the courses to settle into a routine

so that course requirements would have been established. The start of the survey process was set for the second week in October, 1981.

It was decided to conduct personal interviews with some of the faculty members and survey the rest by mail questionnaire. The natural way to do this was to interview the full-time faculty members, who all had assigned office space, and send questionnaires to the part-time faculty members. The latter have no assigned office space, but they all have a departmental mail box.

Interviews were arranged with all but one of the thirteen full-time faculty members, but we were subsequently able to get a mail questionnaire from that one faculty member. These interviews followed the instrument much more closely than in the preliminary set of interviews. The respondent was read the question and the available responses, then the interviewer recorded the responses given. There were two places in the instrument which generally drew questions or comments. Several respondents had trouble understanding the distinctions between the five classes of faculty research (Question #5). The question could be improved by restricting the responses to (1) funded research, (2) preparation for meetings or publication, and (3) course related research.

The other area which drew some questions was the list of activities in question seven. Their questions always involved some activity they utilized in a course which was

not an explicitly listed option. In all cases the activity was similar enough to an option listed that it could easily be checked in that class. Examples include, abstracts of readings (classed as a short report), Individual Educational Programs (classed as a lesson plan), and intelligent class participation (classed with short reports). All in all the interviews were positive interchanges regarding library services. All the faculty members interviewed were very open and receptive to the interview.

On the other hand, the mail survey was quite another story. We received only three of twenty-one questionnaires sent out, even after a follow-up note was sent out. The reasons for such a low response rate are as unknown as they are perplexing. It is certainly a circumstance worthy of note to any reader planning to survey a population through the mail.

Appendix III contains the complete questionnaire, including the cover letter, the address flap on the verso of the map, and the follow-up note.

Tabulation and Analysis of the Data

The primary focus of this study is the relationship between required activities in the courses surveyed and anticipated library use. We will discuss this first, then look briefly at faculty information environment.

All the data collected in this limited survey was tabulated according to simple frequency, and then only in the

case of the data from questions seven and eight was one divided by the other to get a simple proportion. Since we had only sixteen questionnaires to work from, it was not possible to make the comparisons we had hoped. The frequency counts and the maximum for each category are shown in Figure 6.

What we wished to gather from the primary portion of the questionnaire was data which could be systematically applied to an information need formula. The formula was based upon the concepts covered in Chapter I. Specific activities generate certain information needs. These information needs can be satisfied by a certain number of a certain class of documents. And then, depending upon availability, accessibility and usability factors, a certain number of documents will be sought in the library. We can express this in the formula:

$$\left[\begin{array}{l} \text{Probable} \\ \text{number of} \\ \text{documents} \\ \text{needed per} \\ \text{activity.} \end{array} \right] \times \left[\begin{array}{l} \text{Number of} \\ \text{students} \end{array} \right] = \left[\begin{array}{l} \text{Information} \\ \text{needs of} \\ \text{course} \end{array} \right]$$

From this raw figure, actual demands likely to be placed upon the campus library system would be dependent upon availability of the documents elsewhere (bookstores, school libraries, other academic libraries, or instructors). The CSUN library would like to be the channel of first choice to the extent the budget will allow.

We would have been able to express just such needs figure for each course represented, had there not been one

monumental flaw in the data gathering instrument. The sub-categories in questions eight and nine cannot be directly related to the activities in question seven. This fact was not noticed until the data was in. Nevertheless, the available data does allow us to make some general observations about the population and their behavior, and for the sake of illustration the author decided to follow through with the study using figures based upon educated reckoning. First we will present the findings regarding the general information environment of the students and faculty covered in the survey, then we will present the needs assessment illustration, and finally we will discuss the information related behavior of the faculty.

Sixteen questionnaires were completed which listed data for forty courses. For the fall of 1981 the Department of Special Education offered ninety course sections for which there were 1710 students registered. For the forty courses represented in this study, 824 students are listed as being enrolled. The forty courses and the number of students registered in each are listed in Figure 7. Many individual students are registered in more than one of the courses, but this is not relevant to our study since each course creates an information need situation and independent of the student's other courses. Our population represents forty-seven percent of the faculty, forty-four percent of the courses, and forty-eight percent of the students enrolled in the department's courses. Since this does not constitute a representative

sample, we will discuss only what is represented by this particular group.

As a group the courses are fairly heavily dependent upon documentary information. In addition to a heavy reliance upon purchased texts (by 27 courses) and instructor supplied materials (by 28 courses) there is strong expected use of library supplied: journal articles (by 29 courses), books (by 26 courses), and audio/visual products (by 22 courses). Only ten courses anticipated the use of tests, whereas fourteen courses indicated the need for kits, games and other miscellaneous products. As would be expected, there is an increase in the expected use of ancillary information from upper division classes to graduate. There is an average increase of seven percentage points in the frequency of expected usage of each document variety between upper division and the graduate level.

It is noteworthy that seventy-three percent of the courses expect use of library journals and sixty-five percent of the courses expect use of library books. All the other library supplied materials come in rather low with fifty-five percent using audio/visual products, thirty-five percent using kits and games, and twenty-five percent using tests. Only seven of the forty courses expect little or no use of library materials.

The frequency of use of the various course activities breaks down as follows:

Short reports	-	28 courses (70%)
Tests in class	-	26 courses (65%)
Lesson plans	-	18 courses (45%)
Skill performance	-	18 courses (45%)
Term paper	-	15 courses (38%)
Media project	-	12 courses (30%)

The very popular short reports can include such things as reports of reading, committee productions or a series of mini-research projects. In this category it is interesting to note the relatively low frequency of term papers overall; however, they are somewhat more frequent at the graduate level than the upper division (54% to 35%).

As can be seen in Figure 8, Question 9, Special Education students are expected to utilize many document collections. Several figures are interesting on this list. The relatively high position of the Instructional Materials Laboratory (including kits, games, and programmed instructional materials and the tools for making such materials) is unexpected when compared with the frequency of media projects (30%) and low expected use of such materials. The probable explanation for this is the combined needs of "skill performance (including student teaching)" and "media projects." The high placement of the Library on Deafness was no surprise since many of the instructors had commented on the unique nature of that collection and its critical value to their teaching. Only

two of the sixteen instructors felt their students needed to use U.C.L.A.'s collections.

In general, this group of courses seems to favor in-class exams and multiple short duration reports for grading purposes. The most frequently utilized documentation channels are book-stores and the instructors followed closely by library articles and library books. The instructors surveyed expected their students to make vigorous use of the CSUN library services, but the Library on Deafness and school libraries seem to be at least convenient alternatives if not strong competitors for student library use. This is an area in which further examination might prove beneficial to the CSUN Libraries. Are these libraries recommended because the CSUN Libraries are somehow inadequate, or do they simply supply services which are outside the CSUN Library objectives?

The general data indicates that this group of faculty regularly involve their students in the use of library materials. This is nice to know, but we would like to have a more quantitative measure of the information needs of the group. By using the formula presented above, we can get an estimate of information need based upon document exposures per course. This total being generated from (1) the likely number of document exposures expected by the faculty per grading activity, and (2) the document variety expected by the faculty to fill the needs of the various assignments.

With the instrument used in this study we were only able to calculate general relationships between each activity and each type of document channel. We did this by tallying the co-occurrence of the items in question seven and question eight in matrix format. Document channel tallies were divided by activity tallies to obtain the proportion of time the channel is associated with the activity. In order to get a more accurate figure the instrument should have been designed in an hierarchical tree. If an instructor checked an activity as being required in the course, he would be asked to check the variety of documents which would fill the needs of that assignment; and then for each document variety, where it was expected to be obtained. If such a survey were completed by a representative sample of the group under study, then the balance of the population need only be asked what activities they require for a grade. The use probability could then be used in the computation of need for each course.

We were able to rank the activities in terms of number of document channels and the total level of probability of association with each channel. A minimum number of document exposures was assigned (based upon conversations with instructors) to each activity together with document channels provided by the library rated highest for that activity.

Term paper	= 6 exposures (books, articles, A/V)
Short reports	= 5 exposures (books, articles, A/V)
Lesson plans	= 4 exposures (books, articles)
Tests	= 3 exposures (books, articles)
Media projects	= 2 exposures (A/V, kits & games)
Skill	= 1 exposure (A/V, kits & games)

By adding the appropriate number of exposures per activity required in the course we get the number of expected exposures per student. We then multiply this times the number of students to get the total number of exposures needed by that class. Again, these figures represent only the anticipated need for library documents in addition to textbooks and instructor supplied materials. "Exposures" here refers to the number of different documents used by each student in completing each task. It is very likely that there is something like a Bradford distribution in the frequency of use over the range of relevant documents.⁴⁵ This means that a relatively small number of documents (in this case journals and books) are the focus of much of the need. Accordingly, we would expect that a large percentage of the anticipated 8517 exposures is repeat uses of a certain number of documents.

Two other factors can be related to these need figures to improve their usefulness. Anticipated exposures can be tallied for lower division, upper division and graduate to get an idea of the level of subject depth or sophistication.

⁴⁵Francis Narin and Daniel Garside, "Journal Relationships in Special Education," Exceptional Children 38 (May 1972):702.

Additionally, a Library of Congress Classification span could be deduced for each course as McGrath and Durand have done.⁴⁶ A histogram could be constructed with the subject classification across the horizontal axis and the level of need vertically over the appropriate subject range. The level of need could also be divided by lower division, upper division, and graduate needs. In the final part of this paper we will discuss recommendations for implementing such a study.

The data collected on the faculty respondents (Questions 2, 4, 5, 6, 10, and 11) indicates generally typical university information behavior. Five live within three miles of the campus while ten live more than five miles away. Thirteen use the CSUN Libraries once per week or more. All but four instructors checked off one or more research activities in which they engaged. The most frequently checked research were research in conjunction with a professional organization and personal research (ten each).

Question ten produced some very interesting results. The preferred channels for learning about new materials rated as follows (most productive to least):

Personal subscriptions	1.1
Talking with colleagues	1.2
Professional meetings	1.2
Communication with organization	2.0

⁴⁶William E. McGrath and Norma Durand, "Classifying Courses in the University Catalog," College and Research Libraries 30 (November 1969):533-539.

Indexes in library	2.1
Previous graduate work	2.2
Library card catalog	2.9
Perusing library journals	2.9
Library shelf browsing	3.2

The library obviously plays a small role in informing the faculty about what is new in this field. Otherwise the channels of choice are about what would be expected based upon numerous past studies. The important point here is that the faculty endeavors to keep informed outside the library and yet they come in to the library on a regular basis. It would seem, then, that the faculty themselves are the best source for selection help.

Conclusions and Recommendations

The most fundamental aspect of the survey method presented here is that it is possible to obtain a satisfactory estimate of documentation needed to complete student assignments. In the academic environment this is made possible because of the instructor's preconceived notion as to the nature of the finished product. Though this relationship between student assignments and instructor expectations could be utilized in the study of any separate aspect of the library's operation, we have used it to determine general, unrestricted information needs of the students. As such it does produce a figure of expected document exposures needed to complete the tasks specified.

It must be remembered that the expected document exposures figure is only an estimate whose accuracy is dependent upon the accuracy of each element in the formula. But, the advantage of this technique is that it distributes the estimating process over all the activities and courses involved thus deriving greater detail and accuracy. If a set of solid expected document exposure figures can be determined for each group under study, you will be assured of greater overall accuracy since the other elements are derived from more objective sources (enrollment figures and required course activities collected by library staff).

The figures produced from a study such as the one presented here could prove very helpful in making management decisions in the library, but all the cost factors must be considered against any benefits which might be realized. It is true that this type of survey is very demanding of scarce library staff man-hours, but the management staff should consider the benefits of having numerical figures on the need for the library's materials. Since the figures can easily be related to spans in the shelf classification scheme, the results can help the collection development staff to identify areas of possible heavy demand. The results of such a survey could also be useful in support of budget requests. The actual survey process itself could serve an important role in raising the level and quality of faculty-library communication.

This type of a survey is intended to consist of two parts. Part one is an intensive survey of a small but representative sample of each clearly-defined discipline group on campus. The object of this survey is to identify typical teaching activity and the typical level of support documentation needed by each teaching activity. This is best done in personal interviews that are wide ranging and loosely structured around goals and methods of teaching in order to be sure that all types of grading activities peculiar to that discipline have been identified and defined. For each grading activity the faculty member should be asked to indicate the type and amount of ancillary documentation he expects the student to use in completing the assignment. Based, then, upon the most frequently cited number of document exposures expected a needs profile can be constructed for each activity.

With these needs profiles, surveying the entire population is made much easier. We need only to find out (1) what activities are required in each course, and (2) the enrollment in each course. Setting up personal interviews was found to be difficult and time-consuming because of the need to mesh the surveyor's schedule with the instructor's schedule. Surprisingly, telephone interviews were easier to schedule and conduct in this case study than face-to-face interviews. On the basis of this experience we would recommend that for

the total population survey each instructor be contacted by telephone. It should be possible to get course numbers and responses to the two questions for each course in five to ten minutes.

The author feels that the technique presented here will produce sufficiently accurate estimates to reflect the greater part of student library usage. However, more research and development is needed to demonstrate its actual effectiveness. We have described above how the instrument can be improved and how the survey process might be better employed. There is one other aspect which needs to be examined in the future. Actual student behavior in relation to their assignments needs to be studied. If a class of thirty students is required to complete a term paper in which the instructor expects ten to fifteen references, to how many documents are the students actually exposed? It would be beneficial to know how actual student behavior could be generalized and incorporated into the formula presented here.

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FIGURES

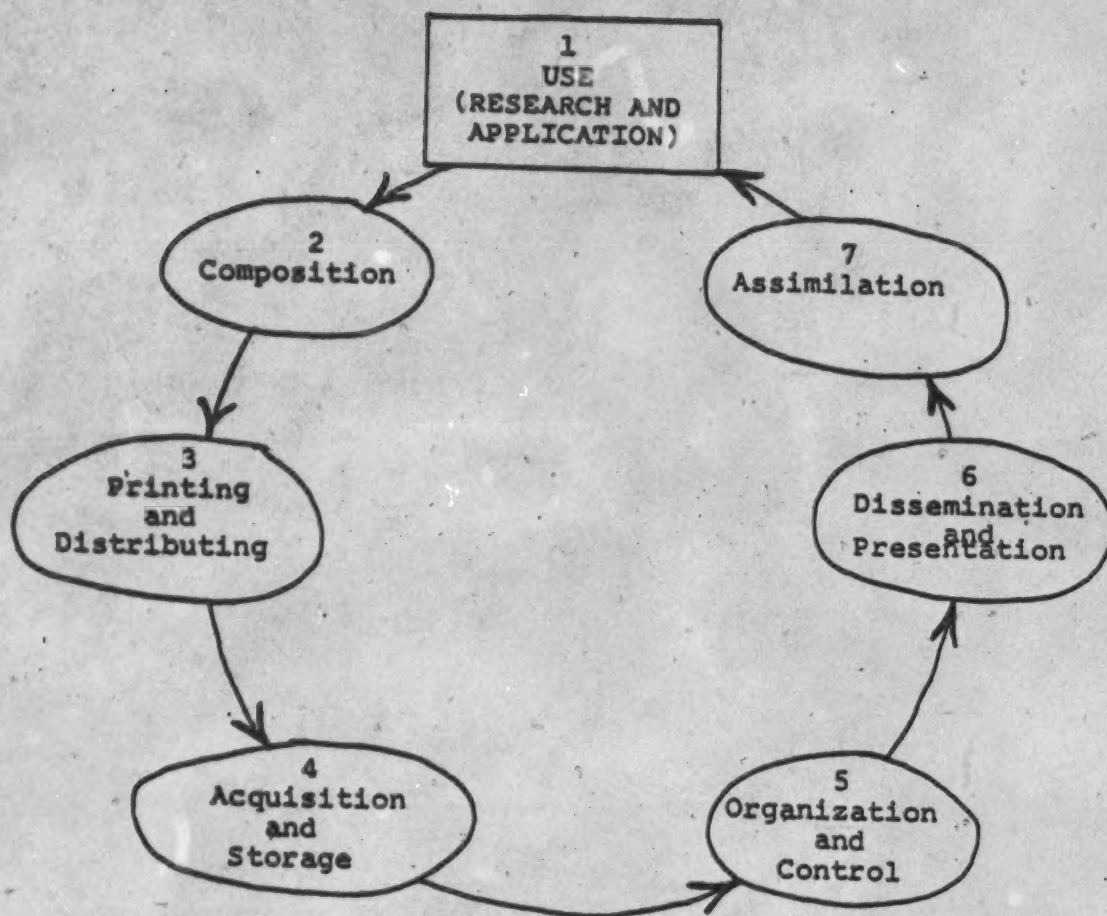


Figure 1.

(Adapted from F. W. Lancaster, Measurement and Evaluation of Library Services, p. 3)

Figure 2.

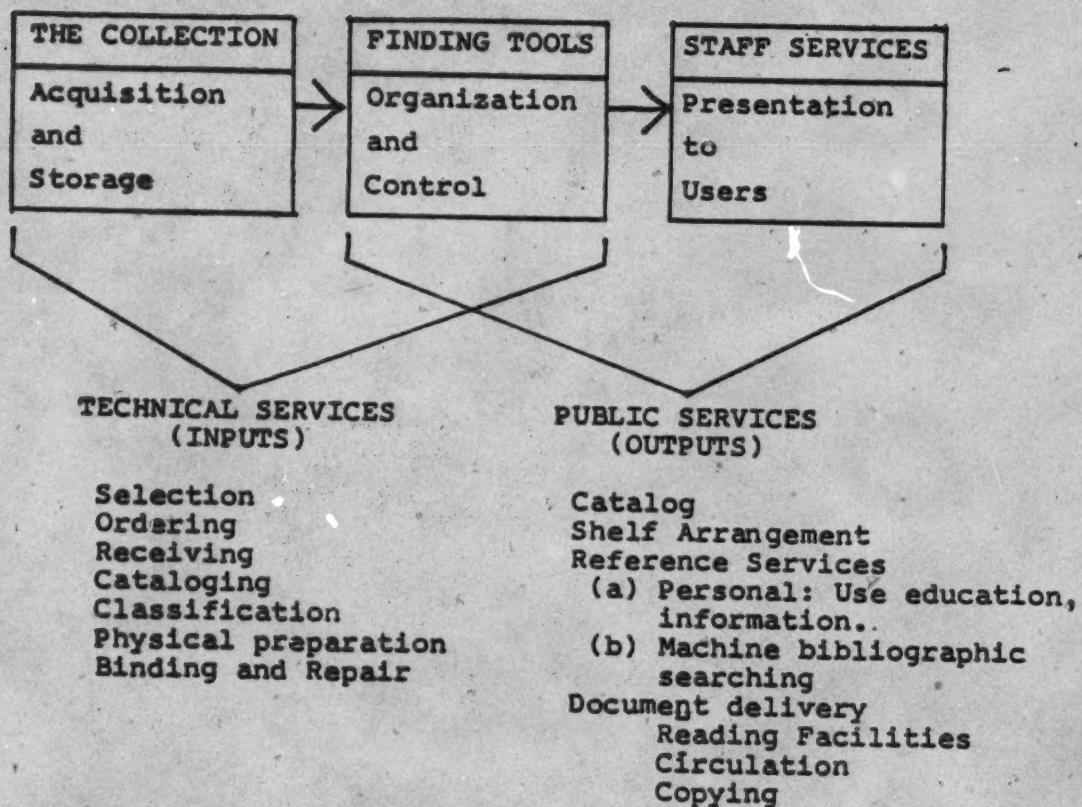


Figure 3.

(Adapted from Brian Vickery, Information Systems, pp.48-52)

INFORMATION GATHERING BEHAVIOR

A. Environment

1. Nature of the institution at which the respondent works (private/ public, academic/ profit, type of industry)
2. Number of workers
3. Size of work team
4. Duration of the project
5. Rank of the respondent in the institution
6. Communication structure of the institution
7. Nationality of respondent
8. Nature of the project (project objectives, time constraints)

B. Respondent

1. Age
2. Education level
3. Linguistic ability
4. Nature of the respondent's tasks (basic/applied, research/production/management/teaching, etc.)
5. Subject field of job
6. Volume and level of current-awareness activities
7. Length of experience on the job
8. Professional social behavior
9. Volume of search activity (in addition to current-awareness)
10. Purpose of search (publication/ teaching/ research/ professional meeting)
11. Purposive + serendipitous searching
12. Stage of research
13. Stage of acceptance of proposed innovation
14. Search time constraints
15. Productivity of searcher
16. Search method
17. Time spent on search

C. Message

1. Subject field
2. Date of publication
3. Type of message (theory/ data/ methods and procedures/ review/ etc.)
4. Extent of message (full text/ abstract/ extract/ index records)
5. Level of treatment (layman, apprentice/neophyte, scientist/scholar)

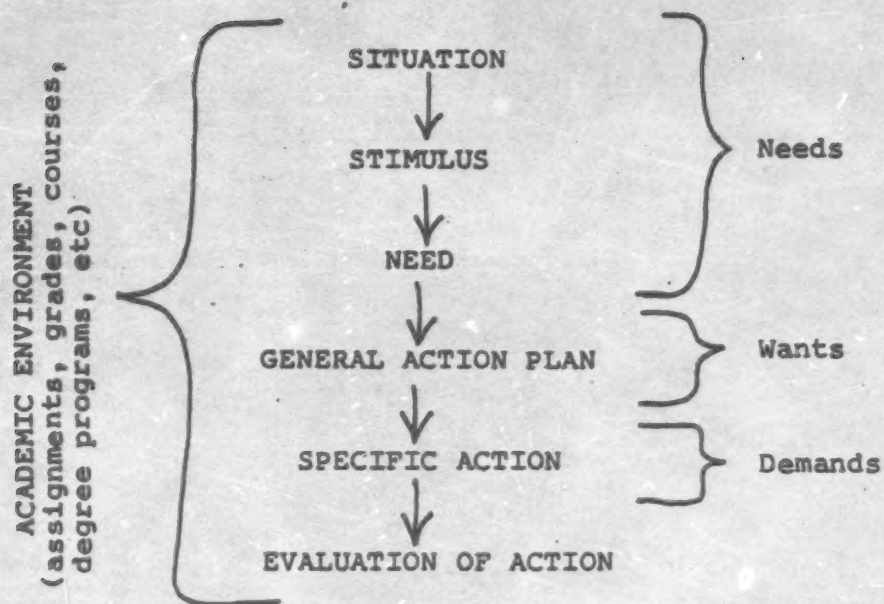
D. Channel

1. Type of channel (personal/ impersonal)
2. Directness of channel (primary/ secondary)
3. Bibliographic form of document (book, article, film, phonodisc)
4. Use for which document was created
5. Sections of journals (news, editorial, reviews, advertisements, classified, research reports)
6. Form of personal channel (salesperson, team-member, external specialist)
7. Characteristics of secondary media (subject field, indexing vocabulary, storage medium, file organization)
8. Language of medium
9. Perceived ease of use

E. Source

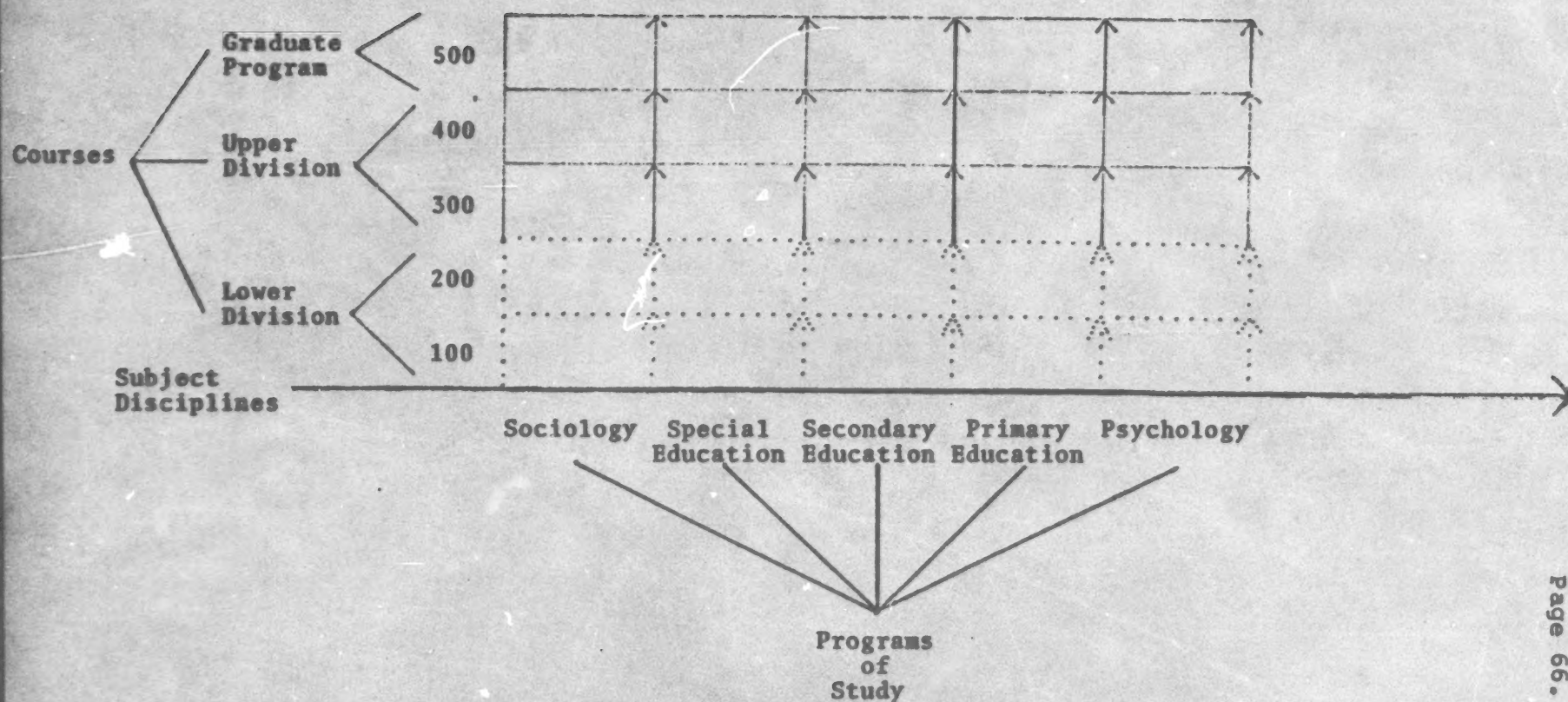
(producer, reprocessor, facilitator)

Figure 4.



(Adapted from Mick, et al., "Toward Usable User Studies," p. 352)

Figure 5.



..... = Entrance into classes on the 100 and 200 levels is not usually dependent upon previous work in the discipline.

Figure 6.

DATA TOTALS

Questions:

1. Title of respondent: (incomplete)

2. Length of time with CSUN:

1 year = 1	7 years = 1	13 years = 0
2 " = 3	8 " = 0	14 " = 0
3 " = 1	9 " = 2	15 " = 1
4 " = 2	10 " = 2	
5 " = 2	11 " = 0	
6 " = 0	12 " = 1	

3. Campus committee membership: (incomplete)

4. Distance from campus:

1 mile = 1	4 miles = 1
2 " = 4	5 " = 3
3 " = 0	6+ " = 7

5. Research activities of faculty:

- Formally funded = 4
- CSUN related = 6
- Professional af. = 10
- Personal = 9
- (consulting) = 6

6. Frequency of library visits:

- Two or more times per week = 4
- Approximately once per week = 4
- Two or three times per month = 5
- Two to four times per semester = 1
- Three or fewer times per year = 2

7. Activities required for a grade:

a. Exams	= 26	courses
b. Term papers	= 15	"
c. Short reports	= 28	"
d. Lesson plans	= 18	"
e. Media projects	= 12	"
f. Skill performance	= 18	"

8. Document types expected to be used:

a. books (bookstores)	=	28
b. books (library)	=	26
c. articles (library)	=	29
d. Instructor's materials	=	28
e. Tests	=	10
f. Audio/visual materials	=	22
g. Kits, games, etc.	=	14

9. Expected location of documents:

- Oviatt (general collection)	=	14
- Instructional Materials Lab.	=	13
- Bookstores	=	12
- Library on Deafness	=	11
- School libraries	=	10
- South (general collection)	=	9
- Reserve Book Room	=	9
- CSUN A/V Services	=	7
- Schools Resource Collection	=	4
- UCLA	=	2

10. Preferred current-awareness channels:

a. Colleagues	=	1.2 (mean scores)
b. Subscriptions	=	1.1
c. Previous academic work	=	2.2
d. Bibliographic indexes	=	2.1
e. Library card catalog	=	2.9
f. Library journals	=	2.9
g. Library browsing	=	3.2
h. Professional meetings	=	1.2
i. Communication with professional societies	=	2.0

11. Difficulty in using the library?

NO = 9

YES = 7

(mutilated or missing journal articles, insufficient copies for loan, missing books)

(Deafness Library not open enough)

Figure 7.

COURSE #	students	exposures/ student	total	TYPE OF DOC. (from ques. 10)						
				a	b	c	d	e	f	g
160	29	8	232						x	x
160	11	11	121		x	x			x	
160	26	1	26	x						
160	26	1	26	x						
161	25	9	225		x				x	x
TOTAL exposures (lower div.)			630							
400	34	8	272	x	x					
400	30	16	480		x		x	x	x	
401	33	9	297	x		x			x	
401	41	8	328	x	x	x	x			
401	34	13	442	x		x				
405	35	11	385	x		x	x		x	x
405	33	18	594	x	x	x	x			x
410	23	11	253				x		x	
424	18	18	324	x		x			x	
432D	21	18	378	x	x	x	x		x	
433D	30	15	450	x	x	x	x			x
435	24	20	480	x	x	x	x		x	x
438D	16	5	80						x	
438CD	15	7	105		x	x	x	x		x
438CDA	8	0	0							
443	7	14	98	x	x	x	x		x	
457	17	7	119				x			x
457	6	7	42		x	x	x	x	x	x
462	20	14	280	x	x	x	x			
463	21	12	252		x	x	x	x		
467	3	9	27		x	x	x	x		
468	2	10	20		x	x	x	x		
496E	15	3	45	x		x	x	x	x	x
496S	7	9	63	x	x	x	x		x	
TOTAL exposures (upper div.)			5814							

cont.

Figure 7.(cont.)

COURSE #	students	exposures/ student	total	TYPE OF DOC. (from ques. 10)						
				a	b	c	d	e	f	g
506	20	11	220	x	x	x		x	x	
507	6	9	54	x	x	x	x	x		x
520	22	17	374	x	x	x	x		x	
562	26	8	208	x	x	x	x			
564	19	9	171	x	x	x	x			
566C	23	15	345	x	x	x	x		x	x
567	25	8	200	x	x		x			
570	10	14	140	x		x	x	x	x	
574	16	8	128	x	x	x	x		x	
574L	16	8	128	x	x	x	x		x	x
576	15	6	90	x		x	x			
576L	15	1	15	x						
TOTAL exposures (graduate)			2073							
TOTAL exposures (overall)			8517							

APPENDICIES

APPENDIX I

(Adapted from Hamburg, et al., Library Planning and Decision-Making Systems, pp. 238-242)

University Library Program Structure

- I. To provide user area and furnishings
 - A. To provide user area (library unit)
 - 1. To provide study area
 - 2. To provide user service area to include rest rooms, snack room, telephone, etc.
 - B. To provide user furnishings (Library unit)
 - 1. To provide seating
 - 2. To provide other furnishings
- II. To provide access to documents within the library
 - A. To manage document collections (subject category)
 - 1. To select documents
 - 2. To acquire documents
 - 3. To process documents
 - 4. To weed and maintain collection
 - 5. To store documents
 - B. To control use and location of documents
 - 1. Circulation control for documents
 - 2. Loans to other libraries
 - 3. Periodical control
 - 4. Reserve service
 - 5. Reshelving
 - 6. Security
 - C. To facilitate document use
 - 1. To provide accessory equipment (microform readers, audio and visual equipment)
 - 2. To provide copy service
- III. To provide access to documents in other libraries
 - A. To secure interlibrary document loan
 - 1. To assist users in requesting documents from other libraries
 - 2. To request, receive, control and return

documents from other libraries

B. To coordinate and administer interlibrary access agreements

IV. To provide aids in identifying and locating documents and to provide information

A. To provide aids to locate documents within the library

1. To classify documents and to provide catalogs

2. To prepare and post directional signs and explanatory placards

B. To provide aids to identify existing documents and to locate documents in other libraries

1. To manage index collection

2. To control use and location of indexes

3. To facilitate index use

4. To assist in compiling cooperative inter-library catalogs of holdings

C. To provide personal assistance for document identification and location and to provide information

1. To assist users in performing literature research and in identifying or verifying specific citations

2. To provide reference information

V. To promote use of the library

A. To provide publications, advertisements, and exhibits

B. To provide personal communication with members of the population being served

1. To perform liaison visits with faculty

2. To conduct library tours and classes regarding the use of the library

VI. To provide general administrative and support service

A. To provide administrative service

1. To administer personnel activities

2. To handle payments, receipts, and accounting requirements

3. To prepare programs, projects, and budgets

4. To administer reports

5. To perform other administrative services

as required

B. To provide support services for library
administration

C. To provide staff area

APPENDIX II

SPECIAL EDUCATION

(School of Education)

Chair: Barbara Kulik

DEPARTMENT OFFICE: Monterey Hall 110, Phone: 885-2596.

Secretary: Mary Cotter

UNDERGRADUATE ADVISERS: Contact Credential Preparation Office, Monterey Hall 100D

GRADUATE ADVISERS: All Faculty

FACULTY: Kenneth Armstrong, Ray Barch, Ann Bianco, Lawrence Fleischer, Ruth Forer, Joyce Groode, Joyce Hagen, Philip Hansen, Barbara Kulik (Chair), Grace Lee, Kenneth Mangan, June Newbirk

DEGREES OFFERED: M.A. Concentrations in the following areas: Deaf Education, Learning & Reading Disorders, Mental Retardation, Special Education.

CREDENTIAL INFORMATION: Special Education Specialist Credential in the following areas: Communication Handicapped, Learning Handicapped, Severely Handicapped, Gifted, Physically Handicapped.

ACADEMIC ADVISEMENT: Faculty advisers are available in each area of specialization prior to registration dates and at regular intervals during the semester. Faculty advisers are prepared to assist and advise the student in the selection of courses appropriate to fulfillment of credential and degree requirements.

DEPARTMENT PROGRAMS: The Special Education Specialist Credential Program is designed for persons who desire to work with exceptional students in a school setting. The program is open to both teachers who already possess a basic teaching credential and candidates who wish to work on a basic teaching credential concurrently with the Special Education Specialist Credential.

Advanced specialization programs within the program permit candidates to work with the following exceptional students: (1) Communication handicapped with deaf and hard of hearing; (2) Learning handicapped; (3) Severely handicapped; (4) Gifted; and (5) Physically handicapped.

The Graduate Program is organized to permit specialization and an advanced degree in the following areas: Deaf Education, Learning & Reading Disorders, Mental Retardation, Special Education.

The Resource Specialist Certificate Program is for experienced educators who wish to enhance and expand their qualifications for present and future positions as Resource Specialists in the implementation of the California Master Plan for Special Education.

Requirements for admission vary within specialization areas. However, candidates may reasonably expect the following: a) Satisfactory completion of the Graduate Record Examination or Miller Analogies Test, b) Approval of departmental screening committee, c) Teaching Credential within area of exceptionality.

REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

The Master of Arts Degree with a specialization in Special Education is designed for candidates who aspire to in-depth knowledge, skills, and attitude of service for the individual with exceptional needs within the school, community, and institutional setting. Four areas of concentration are provided for specialization: Deaf Education, Learning and Reading Disorders, Mental Retardation, and Special Education. Eighteen units of the minimum required must be 500-level courses.

REQUIREMENTS FOR THE MASTER OF ARTS DEGREE WITH SPECIALIZATION IN DEAF EDUCATION

For admission to classified status:

College requirements for classified status and as further prescribed under each specialization:
Satisfactory completion of the Graduate Record Examination.

Deaf Education

1. B.A. degree with academic major.
2. Undergraduate grade point average of 2.5.

Deaf Education—(Experienced Teachers)

1. B.A. degree with academic major.
2. Undergraduate grade point average of 2.5.
3. Two years of experience teaching the deaf.

For the degree:

Required core for all areas of specialization (9 units)

One course from each of any three of the following areas:

	<i>Units</i>
1. Language Development	
CD 462. Language Development and Language Disorders	3
EDP 534. Language and Concept Development	3
2. Assessment and Research	
ED P 401. Fundamentals of Measurement	3
ED P 401L. Fundamentals of Measurement Lab	1
SP ED 502. Assessment and Evaluation for Exceptional Children and Young	3
3. Remediation	
S ED 420. Reading in the Secondary School: Fundamentals	3
E ED 420. Teaching Reading in Elementary School	3
E ED 521. Foundations of Reading Instruction	3
E ED 522. Diagnosis of Reading Difficulties	3
SP ED 452. Introduction to Learning-Handicapped Pupils	3
4. Services	
SP ED 567. Audiology for Teachers of Deaf	3
H.Sci. 480A. Health Services for Exceptional Children	3
H.Sci. 480B. Health Services for Exceptional Children	3

Requirements in each area of specialization

1. Deaf Education (18 units)	
SP ED 432D. Introduction to Communication Handicapped Pupils	3
SP ED 433D. Instruction of Communications Handicapped Pupils	3
SP ED 435D. Communication with Deaf and Hard of Hearing	3
SP ED 562. Total Communication B	3
SP ED 564. Fundamentals Teaching Language to the Deaf	3
SP ED 565. Fundamentals Teaching Language to the Deaf	3
SP ED 566C. Techniques of Teaching Secondary Deaf Students	3
SP ED 569. Seminar in Community Resources for Secondary and Post-Secondary Deaf	3
2. Deaf Education (Experienced Teachers) (12 units)	
SP ED 560. Fundamentals of the Education of the Deaf	3
SP ED 562. Total Communication B	3
SP ED 564. Fundamentals of Teaching Language to the Deaf	3
SP ED 565. Fundamentals of Teaching Language to the Deaf	3
SP ED 566A. Instructional Systems for the Deaf	3
SP ED 566C. Techniques of Teaching Secondary Deaf Students	3
SP ED 599X. Independent Study	1
SP ED 599Y. Independent Study	2
SP ED 599Z. Independent Study	3

Professional Requirements (6 units)

Upper division coursework in student's area of professional interest to be taken outside of the Department of Special Education.

* Final requirements in all areas of specialization	3
SP ED 598. Thesis or SP Ed 597. Directed Comprehensive Studies	

REQUIREMENTS FOR THE MASTER OF ARTS DEGREE— WITH SPECIALIZATION IN MENTAL RETARDATION

For admission to classified status:

1. College requirements for classified status.
2. Satisfactory completion of the Graduate Record Aptitude Exam.
3. B.A. degree with academic major.
4. Teaching credential in area of Mental Retardation.
5. Undergraduate grade point average of 2.5.

Core Requirements (9 units). One course from each of any three of the following areas:

	Units
1. Language Development	
CD 462. Language Development and Language Disorders	3
EDP 534. Language and Concept Development	3
2. Assessment and Research	
EDP 401. Fundamentals of Measurement	3
EDP 401L. Fundamentals of Measurement Lab.....	1
SP ED 502. Assessment and Evaluation for Exceptional Children and Youth.....	3
3. Remediation	
S ED 420. Reading in the Secondary School: Fundamentals.....	3
E ED 420. Teaching Reading in Elementary School	3
E ED 521. Foundations of Reading Instruction	3
E ED 522. Diagnosis of Reading Difficulties	3
SP ED 452. Introduction to Learning Handicapped Pupils	3
4. Services	
SP ED 567. Audiology for Teachers of Deaf	3
H.Sci. 480A. Health Services for Exceptional Children	3
H.Sci. 480B. Health Services for Exceptional Children	3
Requirements in Area of Specialization (18 units)	
SP ED 503. Program Planning for Exceptional Children and Youth.....	3
SP ED 510. Practicum in Educational, Medical and Social Aspects of Mental Retardation	3
SP ED 452. Introduction to Learning Handicapped Pupils	3
SP ED 453. Instruction of Learning Handicapped Pupils	3
SP ED 580. Problems and Practices in Special Education	3
ED F 554. Education and the Disadvantaged	3
CH S 432. Counseling the Chicano Child	3
PE 529. Perceptual and Motor Learning	3

Final Requirement

SP ED 598. Thesis for SP ED 597 Directed Comprehensive Studies

REQUIREMENTS FOR THE MASTER OF ARTS DEGREE— SPECIAL EDUCATION CONCENTRATION

For admission to the program:

1. B.A. degree with academic major or 12 semester hours of postgraduate coursework in an academic subject matter area.
2. Basic credential to teach exceptional children.
3. Satisfactory completion of G.R.E.

For the degree:

Corequisites: Two years of successful full-time teaching in one of the areas of Special Education.

Core Requirements	Units
ED P 502. Educational Research	3
or	
ED F 532. Social Problems and Education	3
ED F 514. Social Philosophy and Education.....	3
ED P 505. Advanced Psychological Foundations	3
SAS 550. Leadership in Admin. and Curr. Development	3

Area of Specialization	
SP ED 580. Problems and Practices in Special Education	3
SAS 569. The Organization and Administration of Special Education	3
SP ED 595T. Seminar in Selected Studies.....	3
Electives (Minimum of 9 units—to be selected with approval of adviser.)	
Comprehensive exam or Thesis.	

REQUIREMENTS FOR THE MASTER OR ARTS DEGREE WITH SPECIALIZATION IN LEARNING-READING DISORDERS

For admission to the program:

Prerequisites:

1. Completion of application for admission to appropriate area.
2. Approval by departmental screening committee prior to obtaining classified graduate status.
3. Completion of ED P 311 (ED P 430 for Early Childhood Education candidates), or equivalent courses.
4. Satisfactory completion of Graduate Record Aptitude Exam or Miller Analogies Test.

For the degree:

General Course Requirements:

- ED P 502 or EDP 510
ED F 514 or ED F 552
ED P 505
SP ED 597 or 596

Program of Specialization

Required:

	Units
SP ED 570. Reading Processes	3
SP ED 571. Advanced Study of Reading Problems	3
SP ED 572. Clinical Procedures and Testing	2
SP ED 572L. Clinical Procedures and Testing Laboratory.....	1

Select, with approval of adviser, a minimum of 12 units which may include, but is not limited to, the following:

SP ED 573. Vision Screening and Aural Reading Tests.....	2
SP ED 573L. Vision Screening and Aural Reading Tests Lab	1
SP ED 574. Laterality and Perception	2
SP ED 574L. Laterality and Perception Laboratory	1
SP ED 575. Procedures and Materials.....	2
SP ED 575L. Procedures and Materials Laboratory.....	1
SP ED 576. Clinical Organization and Administration.....	2
SP ED 576L. Clinical Organization and Administration Lab.....	1
SP ED 599. Independent Study	3

REQUIREMENTS FOR THE RESOURCE SPECIALIST CERTIFICATE

For admission to the program:

1. Three or more years of teaching experience.
2. One or more Special Education teaching credential.
3. Meet existing standards of the University and the department for admission to graduate study.
4. Acceptance by a department sponsor.

Core Component (minimum of 12 units)

	Units
SP ED 562. Assessment and Evaluation of Exceptional Children and Youth	3
SP ED 503. Program Planning for Exceptional Children and Youth	3
SP ED 504. Affective Education for Exceptional Pupils.....	3
SP ED 520. Classroom Practices in Mainstreaming.....	3
ED F 517. Ethics in School Counseling	3
ED F 520. Ethics in Special Education.....	3

Breadth or Expansion Component

3-12 units required in accord with candidate's experience and background.

Capstone Component (3 units required)

SP ED 576 and 576L. Clinical Organization and Administration and Lab	3
SAS 569. Organization and Administration of Special Education	3

Classified graduate standing is required for enrollment of all 500-level courses.
400-level courses in the Department may carry credit for a Master's Degree in Special Education.

300-level courses do not carry credit for a Master's Degree in Special Education.

APPENDIX III

Wayne R. Montgomery
Science Reference
Rm. 202, South Library
California State
University, Northridge

October 12, 1981

You can help us improve library services here at CSUN and other academic libraries across the nation. Our mission is to get you and your students together with needed facts, books, articles, films, etc. in a timely, hassle-free manner. You can help us improve this service by completing the enclosed questionnaire and returning it through the campus mail to the library. When you have completed the questionnaire simply refold with the return label facing out, staple shut, and drop it in the campus mail basket.

This case study will aid professional librarians in planning efficient and effective academic library services. When completed, the results will be reported to Dr. Norman Tanis, Director of the CSUN Libraries, and to Dr. Barbara Kulik, Chairman of the Department of Special Education. Copies will be available through ERIC (Educational Resources Information Center). Your responses will be held in the strictest confidence and only composite or anonymous data will appear in the published report.

If you would like to discuss this survey with me, please leave a message with Judith Toomey at 885-3012.

Sincerely,

Wayne R. Montgomery

Name _____

Date _____

PERSONAL CHARACTERISTICS

1. Job title or classification: _____
2. Length of time with CSUN: _____
3. Campus-wide or Departmental committee memberships:

4. Using the map appended, please find the number for the circle in which your residence is located then check the corresponding number below.
___ I ___ II ___ III ___ IV ___ V ___ Beyond V.
5. For the academic year 1981-82, will you be engaged in any of the following:
___/ Formally funded research or development (federal, state, non-profit, private)
___/ CSUN related research or development in addition to regular course preparation (e.g. campus planning or fact-finding committees)
___/ Research in conjunction with a professional organization (meeting, seminar, journal article, etc.)
___/ Personal research.
___/ Other extra curricular research/development activities (please specify nature).
6. How often do you visit the Oviatt or the South library (for any purpose)?
___ Two or more times per week
___ Approximately once per week
___ Two or three times per month
___ Two to four times per semester
___ Three or fewer times per year
If your use of the library does not follow any of the patterns above, please explain (e.g. heavily in late summer, then seldom for balance of year).

TEACHING STYLE

7. For the courses you teach this semester, please indicate which of the following activities are used for grading your students. (check all that apply for each of your courses)

COURSE NUMBER	#	#	#	#
a. Objective and/or essay exams (in class)				
b. Formal term paper				
c. Short oral/written reports				
d. Lesson/curriculum plans				
e. Media projects/kits				
f. Skill performance (e.g. student teaching)				
g. Other (please specify)				

8. Which of the following types of media and documents do you expect your students to use? (check all that apply for each of your courses)

	#	#	#	#
a. Books purchased by student				
b. Books supplied by any library				
c. Articles supplied by any library				
d. Materials you supply				
e. Cognitive/behavioral tests				
f. Films, film strips, other media				
g. Kits or games				
h. Other (please specify)				

9. Where do you expect your students to find the items checked in question eight? (please check all that apply)

- | | |
|--|--|
| ☐ Library on Deafness
South Library) | ☐ Bookstores |
| ☐ Instructional Materials
Laboratory | ☐ UCLA |
| ☐ Reserve book room | ☐ USC |
| ☐ Oviatt general collection | ☐ County or school district
resource collections |
| ☐ South general collection | ☐ School library |
| | ☐ Other (please specify) |

10. The following is a list of ways of learning about materials which could be used in your courses, such things as books, articles, films, games, government documents, lesson plans, etc. Please supply a rating of how productive each is for you.

- | | |
|---------------------------|---|
| 1 = Highly productive | 3 = Least productive, though I
still use this method |
| 2 = Moderately productive | 4 = I never use this approach |

- a. ☐ Talking with colleagues
- b. ☐ Personal subscriptions
- c. ☐ Your previous graduate and undergraduate work
- d. ☐ Using bibliographic indexes in the library
(e.g. ERIC, Education Index, Exceptional Children
Abstracts, etc.)
- e. ☐ Library card catalog
- f. ☐ Perusing journals in the library (any library)
- g. ☐ Shelf browsing in the library (any library)
- h. ☐ Professional meetings (presentations, people, exhibits)
- i. ☐ Oral or written communication with a professional
organization, including computerized literature
searches
- j. ☐ Other (please specify) _____

11. Have you or any of your students experienced any difficulty in either (a) locating, or (b) obtaining any of the kinds of items in question eight?

☐ NO. ☐ YES (please explain) _____



(seal here)

CAMPUS MAIL

Wayne R. Montgomery
Room 202
Science Reference
South Library

Dr. John Doe
Department of Special Ed.
CSUN

Wayne R. Montgomery
Room 202
Science Reference
South Library
CSUN

Dear faculty member,

We have already received many of the questionnaires sent out requesting faculty response to library use issues. We sincerely need your response so that we will have an accurate picture of student library needs. Please help us out by completing the questionnaire today and returning it through the campus mail. Thank you.

Sincerely,

Wayne R. Montgomery

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Room 202
Science Reference
South Library
CSUN

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Wayne R. Montgomery